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ABSTRACT

Over the past 30 years, high school driver education has grown from a single-purpose experimental course offered in one public school to a multi-faceted program considered part of the regular curriculum in 14,000 public schools. The driver education curriculum is intended to achieve numerous, sometimes diverse goals. In addition to the obvious short-range goal of a competent motor vehicle operator, another important long-range objective is that of responsible citizenship, both in relation to traffic and in the larger societal setting. The nature of high school driver education has changed over the years, particularly in the laboratory portion of the course, as evidenced by use of simulation and multiple-car method. Financial support of high school driver education has, over the years, shifted from almost exclusive reliance on local tax dollars to some type of special state aid. Whatever the future may hold for high school driver education, it is important for educators to work toward instructional improvement through examining issues and problems relating to: (1) legal authority, (2) organization and administration, (3) teacher selection, preparation, and licensure, (4) curriculum and instruction, (5) facilities and equipment, (6) financing, (7) evaluation, research, and development, and (8) public support. (Author/SB)

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Driver Education in the Schools

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AUTOMOTIVE SAFETY FOUNDATION

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Foreword

When highway safety came to be recognized some three decades ago as a major U. S. social and economic issue, efforts to deal with it were handicapped by the widespread assumption that it could be solved by a simple, single panacea. Many were proposed. Each law, device or program was zealously promoted by its advocate as the total answer, so that the period was one of public confusion and disillusionment.

Not until the first White House Conference on Highway Safety was convened in 1946 did the concept of a balanced program gain national acceptance. This approach has been reinforced during the past two years by promulgation of 16 federal standards under the Highway Safety Act of 1966. They cover a wide range of activities, and bring together in common cause the educator, the engineer, the law enforcement officer, the administrator and many others, including legislators and civic leaders. Each contributes to the total safety objective.

It is not yet possible to measure how much safety each of these activities can produce; data and techniques are both still inadequate. Development of reliable cost-benefit assessment of highway safety programs is an important task yet to be accomplished. Meanwhile, the reduction in the traffic fatality rate by more than 50 percent since that 1946 conference demonstrates the necessity of going forward vigorously with the program.

These background considerations are especially pertinent to the subject of driver education, discussed by Dr. Charles H. Hartman in this issue of *ASF Monitor*. Driver education itself has been hailed enthusiastically as "the answer." Conversely, it has been subjected, particularly in recent years, to sharp criticism. Dr. Hartman's authoritative appraisal cuts through all of the simplistic views to give us a clear and, for the most part, encouraging report, in which the quality of driver instruction, rather than statistical measure, emerges as today's most important criterion.

Among all highway safety programs, certainly driver education in the schools ranks high in popularity, as its remarkable growth attests. Beginning with one class of 18 students in 1933, the program last year reached 13,969 high schools, enrolling nearly 2 million students. Its popularity is shared by parents and students alike.

Dr. Hartman's paper contains several far-reaching suggestions for channeling this public interest and support into constructive improvements. It is timely and valuable.

D. Grant Mickle
President
Automotive Safety Foundation

Dr. Hartman is Director of the Education and Manpower Development Division of the Automotive Safety Foundation. Earlier in his career, he was Associate Professor of Safety Education at Illinois State University. Later, at the University of Wisconsin, he was a visiting lecturer in Teacher Preparation and did research in driver and traffic safety education. He also taught high school driver education in Pennsylvania. He is a 1954 graduate of Millersville (Pa.) State College, and received his M.A. and Ed.D. degrees at Michigan State University. Dr. Hartman is a member of many professional associations and holds offices in national safety and educational organizations.

Driver Education in the Schools

by Charles H. Hartman

OVERVIEW

After several years of planning, he was ready. A step-by-step procedure had been worked out by the young engineering professor at The Pennsylvania State College. The cooperation of officials at State College High School had been assured and a classroom was being made available. His personal car, a 1929 Graham-Paige, had been equipped with a dual brake and clutch. With these preparations, Amos E. Neyhart convened the nation's first classroom and behind-the-wheel driver education course offered during school hours.

As this first class met in 1933, it seems doubtful that either the students or their teacher could have foreseen the extensive growth this school program would subsequently experience. At that time there were approximately 24 million motor vehicles being operated by 35 million licensed drivers in the United States.

Today, licensed drivers *in just five* of our 50 states are more numerous than they were in the entire country when Professor Neyhart began his first class 36 years ago. Latest available figures show that totals for the nation in 1968 were 105 million licensed drivers and more than 102 million registered motor vehicles.

And, while progress has been made in reducing traffic accident rates over the past 36 years, the 55,200 persons who died in motor vehicle accidents in 1968 serve as a pointed reminder that much remains to be done to improve highway safety. An undetermined number of those deaths were attributable to ill-prepared and poorly performing drivers.

Like automobile ownership and use, high school driver education programs have also grown in number. With a base of one public school and eighteen students in 1933, these programs, in the 1967-68 school year, expanded to 13,969 public high schools enrolling 1,985,404 students. This represents 81 percent of the schools and 65 percent of the public school students eligible for such instruction. "Eligible" students are the number enrolled at the grade level where a driver education course is typically provided. In the majority of schools this is at the tenth grade level. (Unless indicated otherwise the 1967-68 school year driver education statistics throughout this paper are from *21st Annual Driver Education Achievement Program* published by the Insurance Institute for Highway Safety.)

Some school administrators have called driver education the fastest growing curricular area in the schools. Growth *has* been remarkable when one considers that World

War II caused a virtual shut-down of activity for a period of several years. In the 1947-48 school year, about 3,000 public schools were offering driver education courses to just under 200,000 students. Annual enrollment in the 20 years since then has increased nearly 10 times.

Driver education critics have lamented its growth over the years. Charges commonly made state that driver education is not a proper function of the schools, or that the instruction provided is not a proven accident countermeasure. Several related and side issues are also involved.

Driver educators themselves have sought reform. Special concern has been expressed with regard to the adequacy of (1) teacher preparation, and (2) the high school course curriculum.

But while some try to halt the effort and others seek to improve it, the trend is clear —each year more schools offer more driver education courses to more students than ever before. And in this situation the past may truly be prologue. What was done prior to 1967 resulted from local or, at most, state initiative. When Congress enacted the Highway Safety Act of 1966, it set forces in motion that are, in time, almost certain to end the uneven program development among the states. The thrust of this legislation is such that, in time, *all* states can be expected to provide some type of driver education programming for both youth and adults.

With the foregoing as background, consideration is now given to high school driver education as it is organized, taught and administered today. Included is an examination of the charges and counter-charges regarding driver education's efficacy as an accident countermeasure. Also discussed are needs and priorities that must receive thoughtful attention if driver education in the schools is to function effectively as one important element of a comprehensive highway safety program.

Modern Driver Education

Today high school driver education courses typically focus primarily, but not exclusively, on safe highway use as a driver, pedestrian and passenger. A second focus is on the development of "traffic citizenship." Such citizenship is reflected not only in the specific circumstances of motor vehicle use, but also in attitudes held and actions taken as a voter, worker, taxpayer, consumer and "citizen-at-large."

The course is typically made available to youth as they approach or reach legal driving age, and is provided in the classroom and laboratory. This terminology (viz., driver education: classroom, laboratory) now has widespread use with one major exception. In California, partially because of the language of the law there, the entire program is called "driver instruction," the classroom aspect "driver education," and the laboratory portion "driver training."

Classroom instruction, in the physical setting, is similar to classroom sessions in other curricular areas. It precedes or is offered concurrently with laboratory instruction.

Laboratory instruction enables a direct application of teaching and learning under actual or simulated driving conditions. The traditional and most widely used form of laboratory instruction, the on-street method,

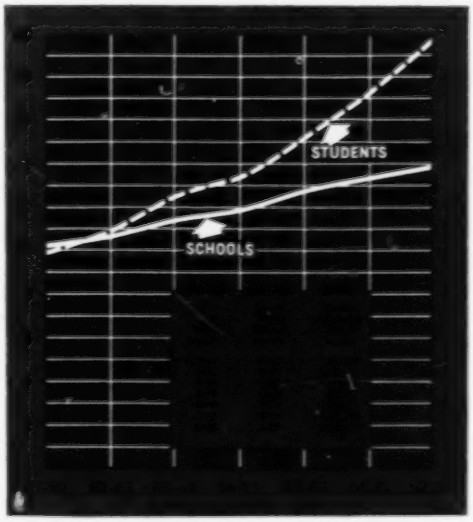
is characterized by a teacher instructing two to four students inside a properly equipped driver education car operating on public streets and highways. Non-driving (observation) time is also a planned phase of the on-street instructional method. Other laboratory alternatives, discussed in detail later, include the simulation and multiple-car methods of instruction.

Minimum time requirements, first recommended nationally in 1949, call for 30 hours of classroom instruction and six hours of "practice driving" in the laboratory setting. The most recent national conference on driver education (1964) recommended that the course extend over a full 90-hour semester; the earlier "30 and 6" recommendation was retained as an absolute minimum. The U. S. Department of Transportation's *Highway Safety Program Manual, Vol. 4: Driver Education* issued in 1969, supports these recommended time allotments. Only 18 percent of the nearly two million students completing a public high school driver education course in 1967-68 experienced course time in excess of the minimum "30 and 6."

In 1967-68, 65 percent of the 13,969 public high schools providing qualifying courses granted credit toward graduation for students successfully completing such courses. Successful course completion is a graduation requirement in 14 percent of these schools.

Scheduling arrangements in use are varied with courses offered as a part of the regular school day, before and after school hours,

Participation in '30 & 6' Courses
SCHOOLS OFFERING COURSES IN 1,000's
STUDENTS ENROLLED IN COURSES IN 100,000's
(49 States and the District of Columbia)



Saturdays and in summer school. In the 1967-68 school year the most frequently used scheduling option for classroom instruction was during the regular school day only. More than half the nation's youth completing these courses received classroom instruction under this option. Nearly 400,000 students, however, received classroom instruction in a "summer school only" program. In scheduling laboratory instruction, the same general picture emerges. Although the numbers of those accommodated during the regular school day were fewer, greater use was made of before and after regular school hours than was the case with classroom instruction.

In the matter of teacher certification, regular secondary teacher requirements prevail in 48 states and the District of Columbia for those seeking certification to teach driver education. All but four states also require completion of one or more college-credit driver education teacher preparation courses. Ten of these states require completion of 12 or more semester-hours credit in driver education and specifically related courses prior to certification. The Department of Transportation manual specifies a minimum of 12 semester-hours credit in safety and driver education courses for high school driver education teachers.

Financing driver education courses in the schools is typically accomplished in either of two forms: (1) regular local school funds, like most other subject areas; or (2) special state aid specifically set aside for driver education. In some states, schools use a combination of these two sources. In 1967-68, 33 states (plus the District of Columbia) used special state-aid plans. The amount paid to local school districts under these plans on a per-pupil-trained basis (state average) ranged from a low of $3.00 in the District of Columbia to a high of $59.45 in Vermont.

Criticism of High School Driver Education

Criticism of high school driver education seems to have developed in three somewhat distinct stages. Early attacks came from educators and others who opposed its inclusion in the regular school program. Later, privately owned and operated driving schools mounted an attack often based on an "unfair competition" theme. Currently, cries are heard that there is no research evidence to prove the value of high school driver education in terms of subsequent accident-violation driving records. Before discussing the question of driver education's effectiveness as an accident countermeasure, an examination of the two previous questions is in order: (1) Does it belong in the schools? (2) What about the alternative of commercial driver training?

Those raising questions about driver education in the schools are found both in and out of education. They seem to be less numerous now, or at least less vocal, than in the earlier days of high school driver education. Whether educator or layman, two basic viewpoints seem to prevail: (1) get it out of the school curriculum, or (2) improve it to make it more worthy of inclusion in the curriculum. For obvious reasons, it is important to understand which of these two basic viewpoints motivates a critic.

Those who seek inclusion with improvements—often driver educators themselves—commonly wrestle with the several issues identified and discussed in the latter sections

of this report. The contentions of those who seek exclusion of driver education from the curriculum, and the counter-arguments thereto, are the concern of the following section.

The arguments for taking driver education out of the curriculum usually center either on philosophical grounds or on claims of ineffectiveness as an accident countermeasure.

Some who oppose driver education in the schools view the program as "unacademic," an "educational frill." The Council on Basic Education, a privately funded group, has long been opposed to driver education in the schools. Because of CBE's concern for "fundamentals," driver education, home economics, vocational education and other "practical" subjects come in for severe criticism.

Edward A. Tenney, a retired English professor, included this criticism of high school education in his 1962 book, *The Highway Jungle*. While Tenney also expressed concern about driver education as an accident prevention approach, much of his criticism centers on what he believes to be another evidence of "life-adjustment" education and an exploitation of youth through consumer propaganda and education in the schools.

There's no doubt that some driver education programs are unacademic. The same can also be said of some history classes and literature courses where teachers, text materials and similar factors are sub-standard. But the trend is clearly in the direction of improved driver education courses with a better definition of objectives, more meaningful content and more relevant and sophisticated teaching.

Tenney's attack on driver education as "life-adjustment" education seems less a concern about driver education than a frustration with the facts of life. As every student of education knows, the renowned John Dewey's ideas have had a profound effect on American educational thought and practice. Fairly or unfairly, Dewey's philosophy has been variously labeled "Progressive Education," "Life Adjustment," "Social Adjustment," and "Education for Citizenship." The arguments have been raging for over half a century and are not yet resolved.

It is a fact that much of driver education is concerned with life and with making those adjustments necessary for maintaining and extending life. The importance of playing an effective citizenship role is an admitted foundation for many courses.

Several lists of driver education objectives have been compiled, and driver education itself has been defined and described in several ways with varying emphases on attitude building, citizenship, problem-centeredness, life-saving skill development, and the interdisciplinary nature of its content and approaches. Dr. William A. Mann of Michigan State University uses this definition: "The purpose of driver education is to prepare students to live and drive in a society which makes heavy demands on the transportation of people and goods. It is concerned with the safe and efficient movement of this traffic. It includes much of the knowledge needed for both safety and efficiency. It is concerned with driving as a social interaction between people rather than as a competitive struggle between cars. It attempts to develop the emotional maturity of the driver, including satisfactory attitudes toward himself and others, along with the

motivation to do what he knows he should do. It makes a start in developing the physical skills necessary to operate the car."

Adding driver education to the curriculum, some believe, subtracts a substantial block of time from English, science, mathematics, and other subject areas. In a number of instances, this allegation is clearly not so. Florida, for example, has a law which dictates that driver education may not replace any of the traditional school subjects. Even where no legislation of this kind exists, the reader should judge for himself how valid this "subtraction claim" may be after examining the realities of a typical situation: Assume a typical "30 and 6" course and offer it entirely within the regular school day. Further, assume six hours total instructional time available per day. Finally, assume four years of high school, 180 days of school per year. On this basis there are 4,320 hours of instructional time available, and driver education utilizes 36 hours or *less than one percent of the high school time available.* When spread over 12 years of formal schooling, driver education utilizes .003 percent of instructional time available.

In this small block of time—little more than a week out of four years of high school experience—the driver educator attempts to meet two fundamental goals. The first of these—improving driver behavior—is the better understood of the two. There is an unfortunate notion in the minds of some that this consists mostly of skill training in starting, stopping and steering an automobile. Other curricular areas, in their formative years, were similarly labeled, such as "physical training," "manual training" and others. When it is properly taught, driver education embraces a combination of knowledge, skill and attitude development experiences that extend far beyond the limited skill concept.

The citizenship goal is discussed by Dr. Richard W. Bishop of Florida State University: "Driver education, well taught, not only improves driver behavior but also tends to develop citizens who understand and support progress in each area of the much-needed comprehensive program for traffic safety. Because citizens generally are uninformed about these programs, they frequently oppose needed official action. This situation is particularly serious under a democratic form of government where officials tend to discharge their duties to the degree the public will accept and support. Classroom instruction seeks to produce the sophisticated traffic citizen needed in our society.

"Furthermore, in today's driver education classrooms are the future traffic police, traffic engineers, traffic court judges, driver licensing officials, driver education teachers, safety council directors, and others whose responsibilities will relate directly to highway traffic. I submit that classroom instruction in driver and traffic safety education can stimulate more students to enter the field of traffic management, and also give them a sound, basic understanding of the traffic problem and the need for vigorous and coordinated effort. Achievement of this objective may influence the traffic accident picture in the future as significantly as teaching youth how to drive."

With tangible curricular and citizenship goals such as these, driver education has found support both in and out of education. Most chief state school officers have taken

a public stand in favor of driver education in the schools; several have given considerable time and effort in its behalf. For instance, the State Commissioner of Education, Byron W. Hansford, of Colorado, has stated: ". . . I think it is high time that we stop quibbling and start directing our time and energy to the solution of the important problems. Personally, I have always subscribed to a definition of education as a means of helping people to live richer, fuller, more productive lives as contributing members of our democracy. Under this kind of definition, there certainly is a place for driver education. . . ."

What About Commercial Driver Training?

Some critics of driver education in the schools can agree with the purpose and goals of high school driver education as previously outlined. "But," they ask, "why should it be done in the schools? Why not by a police department or some other non-school group? Better, why not by privately owned and operated driving schools?"

Some persuasive responses here are:

- More future drivers are found in public schools than any other single place where systematic instruction can reasonably be provided. Therefore, the schools offer the best means for reaching the majority of all new drivers on an annual basis.
- Instruction in school reaches young people at the time of highest interest. That is, education and training specifically concerned with driving a motor vehicle can best be provided just prior to or shortly after reaching legal licensing age.
- School programs enable the use of professionally-prepared, licensed teachers in a familiar and suitable school setting. Non-school programs typically experience difficulty in matching these teacher education standards and in providing and maintaining an adequate educational setting.
- School programs help to develop a broad range of attitudes, skills, and understandings required for safe, efficient driving. Non-school instruction tends to be more narrowly concerned with mechanistic skill training more oriented toward passing the driver license examination than to preparation for a lifetime of safe driving.
- Instruction in schools can begin at an early age and continue over a period of years through a planned sequence of traffic safety education. Thus students can learn early about good pedestrian practices, bicycle use, and related concerns in a systematic fashion that permits reinforcement of learning which can later be applied to motor vehicle operations. Instructional programs outside the schools are generally one-shot efforts that do not offer the advantages of continuity and reinforcement.

It might be added that few police departments, or similar agencies, seek authority to teach driver education or would welcome the assignment were it thrust upon them. In fact, police generally are strong advocates of driver education in the public schools. Crime in the streets is such an overriding and unmet problem that few police departments have sufficient budget and personnel for truly adequate traffic enforcement and mounting a massive traffic education program at the same time.

Commercial driver training schools are sometimes suggested as an alternative to high school driver education courses. Three factors weigh heavily against commercial school instruction on a universal basis: (a) instruction is typically provided by those with lesser educational preparation than the high school teacher; (b) cost of instruction is prohibitive for the lower socio-economic groups, the very groups perhaps most in need of instruction; (c) the public school system holds an obvious advantage for reaching large numbers of students on a systematic basis.

Effectiveness in Accident-Violation Reduction

The debates over driver education: (1) as a proper subject for the schools and (2) as school-directed vs. commercially-operated courses are important, but secondary to the principal issue. The big question is whether or not those completing driver education programs have improved accident-violation driving records. However, those who insist on a clear-cut yes or no answer are likely to be frustrated by evidence currently available.

There is considerable information on the subject. The quality of much of the so-called research, however, leaves much to be desired.

Dozens of studies have been made and the majority of them support the position that those completing a high school driver education course experience fewer accidents and/or are convicted of fewer violations than their age-mates not completing such an instructional program.

One of the more extensive studies was done in Illinois in 1963. Data were obtained from the state's driver license files covering all Illinois drivers between 16-20 years of

"The big question is whether or not those completing driver education programs have improved accident-violation driving records."

age. This sample of over a half-million drivers included two groups: "those who did," and "those who did not" complete a high school driver education course. Analysis showed that those *not* receiving a driver education course were involved in 493 traffic violations and 111 accidents per 1,000 drivers. The corresponding figures for the driver education students were 171 and 56.

But this type of study can be challenged on the grounds that where the course is an elective option, a *pre-selection factor* may be operating. That is, those who voluntarily enroll in high school driver education courses may be more mature, conservative, safety-conscious and otherwise better driving risks than their counterparts who shun the course offering.

The driver education advocate can, in a few instances, respond to this challenge by citing study results where the course was completed by virtually *all* students. Michigan enacted legislation in 1955 that set the minimum driving age at 18 except for those successfully completing a high school driver

education course. For those students, driver licensing eligibility comes at age 16. (A traffic law summary prepared and published in 1967 by the National Committee on Uniform Traffic Laws and Ordinances listed 22 states with legislation of this kind; at least four additional states have enacted laws of this nature since the summary was compiled.)

The practical effect of such laws, when backed by special state-aid fiscal arrangements to support instructional costs, is that the vast majority of 16-year olds in attendance at public schools complete a high school driver education course. In such a situation, any pre-selection factor is rendered inoperative since virtually all students complete the instructional program.

The public schools in Lansing, Michigan represent one such situation wherein virtually all students complete a driver education course. In the early 1960's a study completed in Lansing, using the city's official traffic accident records over a three and one-half year period, produced two significant findings: (a) the Lansing driver education teen-agers experienced only half as many traffic accidents as the national average for their age group; and (b) these teen-agers had 20 percent fewer accidents than Lansing's older drivers, a complete reversal of national statistics.

As indicated earlier, there is much confusion and more than a little bias on both sides of the question of driver education effectiveness. There is at least one "study" to support one's position regardless of what that may be. Whereas the Illinois' study supports high school driver education, a later study done in California tends to counteract such findings. A Connecticut Department of Motor Vehicles study in 1964 showed the high school driver education course as more effective than parental instruction, and both school and parental instruction as more effective than that provided by commercial driving schools.

Headlines sometimes fail to convey the substance of some reports and studies. A 1968 *Report of the Secretary's Advisory Committee on Traffic Safety* to the U. S. Department of Health, Education and Welfare, commonly known as the "Moynihan Report," (Dr. Daniel P. Moynihan was Committee Chairman) was presented in the popular press as anti-driver education. Yet only one chapter of the document was devoted to driver education. In it, a positive approach was taken: "Now, at the hopeful beginnings of a new era, it becomes necessary to give a new cast to driver education. Although there is no conclusive proof as to the comparative effectiveness of various driver education techniques or, for that matter, the whole of present driver education practice, there is even less proof of the efficacy and value of any alternatives to present practices for communicating to the young person the rudiments of how to handle a car in modern traffic, and the associated social responsibilities. But operational driver education programs must continue. The problem is no different in principle than that for education in general. We have to continue with present systems even while recognized needed improvements are being studied. One would hardly advocate a moratorium on all schooling while looking for proof of better methods."

In short, "studies" and statements pro and con on driver education's effectiveness are

easy to come by. Automobile insurance company discounts (usually 10 to 15 percent) for those completing "30 and 6" high school driver education courses should also be noted. Presumably such discounts are provided not on whim, but rather on the basis of reduced risk. The abandonment of high school driver education courses in 1962 would have increased the premium costs of insuring young male drivers by at least $12.5 million dollars in that year alone. Few parents fail to appreciate the economic advantages of a quality high school driver education course when this cost factor is identified.

And so the controversy flourishes, but where is the truth? It may well be found on both sides of the question.

It is not surprising that some high school driver education courses appear unable to produce students capable of better than average driving performance as measured by accident and violation records. Some courses are unquestionably so poorly taught, weakly administered or inadequately oriented that they may truly represent the caution, "a little learning is a dangerous thing."

Accepting as fact that weak programs can exist in a state, it should come as no surprise that statewide studies may show a bland sort of "effectiveness," or indeed no effectiveness at all. The weak programs tend to cancel out the strong ones. As research in this area becomes more sophisticated it seems likely that there will be less reliance on statewide studies and more discrimination between local school programs. In fact, this sort of discrimination has been possible for some years, but the political courage to make public statements about weak programs has not always been abundant.

A 1967 report by the Research Division of the State of Washington Department of Motor Vehicles represents a break from the past. The abstract of that study states: "In general, drivers with high school or commercial driver training have lower accident and violation rates than those with no driver training. Drivers under 21 years of age with high school driver training have lower rates than those with commercial driver training of the same age."

In a subsequent paragraph of the abstract it is stated: "In many Washington counties, rates for drivers 17 to 21 years of age with high school driver training are higher than those for drivers with no driver training of the same age. This may indicate that driver training programs in these counties are relatively ineffective."

If, as the Washington study seems to suggest, there are counties, cities or schools where the instruction is effective, and other places where it is not, it would seem reasonable to examine the ineffective programs with the aim of correcting deficiencies.

Recently a new question was raised for consideration in any attempt to measure the effectiveness of driver education by the use of accident criteria. Dr. Gerald Driessen of the National Safety Council points to a "slippery, misleading unspoken factor" lurking in the commonly used classification system "trained vs. non-trained" or "driver education vs. non-driver education students." Pointing to the fact that virtually everyone is trained to drive in one manner or another (by a friend, relative or even by self-instruction), Driessen emphasized that references to the untrained driver really mean the driver who did not take a formal course of instruc-

tion. He goes on to recommend that the classification system be based on the amount and quality of "accident avoidance training" whether such be learned in formal or informal ways.

Another research authority, Dr. James L. Malfetti of Columbia University, has also spoken out on the problems of traffic accident research, particularly as they relate to driver education effectiveness. Malfetti takes the position that those who say there is no evidence for the effectiveness of driver education usually mean that there have been no adequately controlled studies which demonstrate that driver education courses in and of themselves are responsible for a reduction in accidents, injuries or property damage. His call is for the development of rational criteria and related evaluative instruments.

A start in this direction was made in 1967 when the National Highway Safety Bureau awarded four contracts among two universities and two research organizations. All were under the same work statement which called for development of a plan for evaluating the effectiveness of current or proposed driver education programs. Subsequently, a fifth contract was awarded to the National Academy of Sciences to synthesize the results of the four earlier studies in an attempt to isolate the most effective and useful methods for such an evaluation. The findings currently being made available from these several studies can be expected, in time, to lead to the development of instruments and procedures capable of a sufficiently accurate and sophisticated level of evaluation to permit clear, helpful answers to the evaluation dilemma.

It is noteworthy that some driver educators have themselves sought study and reform of driver education programs without regard to the accident-violation records of the students. Their goal is that the student completing the course demonstrate X-times greater appreciation, understanding, and improved behavior in the traffic situation than was the case when he entered the course. They point out that: (a) a finished product is unrealistic in 36 hours, and only a beginning can be made; (b) societal factors often operate as a counterforce to the instruction; (c) other instructional programs are not asked to "demonstrate their effectiveness in the street or marketplace" in anywhere near the same manner as is driver education; and (d) accidents are statistically rare occurrences in the first place when considering volume of traffic and miles driven.

Currently, the Automotive Safety Foundation has two projects in process that promise to be of material assistance in developing rational criteria, and evaluative instruments for driver education. The Foundation's three-year Driver Education Curriculum Study and Development Project, due for completion this year, will offer sound criteria upon which to plan and conduct more relevant and meaningful driver education courses; (more details are provided later in this report.) ASF staff members also are preparing a "Driver Education Evaluation Checklist" which is due to be released early in 1970. While this instrument is not intended for sophisticated use in evaluating driver education effectiveness solely in terms of accident-violation reduction, it will be useful to teachers, school administrators and interested citizens who seek to improve the quality of local driver education programs,

but are uncertain what to look for and how to bring about needed changes. This approach does not suggest a lack of concern for accident-violation reduction. Rather, it represents a conviction that in addition to accident countermeasure effectiveness, driver education in the schools also should be oriented toward providing students with a broader and deeper understanding of the highway safety problem. The school program eventually should create an informed and active citizenry so essential to future legislative, administrative, and research progress. There is some evidence that this is already happening.

From these efforts, and others, the near future may bear witness to important changes in the preparation and improvement of drivers—along with a research capability to continuously evaluate and improve such programs. Then the question will be less, "Does it or doesn't it work?" and more often, "How can it be made to work better?" The section which follows underscores this need, previously unmet, for continuous research and development efforts. Such an effort will help overcome current program deficiencies and raise the level of driver education effectiveness for the betterment of society.

NEEDS AND PRIORITIES

To bring about an improved level of driver education effectiveness, much is required in addition to an upgraded research and development effort. On the remaining pages eight areas of need are identified with priorities assigned as needed. These areas are: Legal Authority; Organization and Administration; Teacher Selection, Preparation and Licensure; Curriculum and Instruction; Facilities and Equipment; Financing; Evaluation, Research and Development; Public Information and Support.

Legal Authority

Legal authority to conduct driver education courses in the schools has long been established. While specifics vary greatly from state to state, virtually all states either require or permit the teaching of "safety education," which includes driver and traffic safety education. In some states as early as the 1920's, specific references were made in the state school codes for the teaching of what was then called "automobile safety education," or traffic safety education.

Those states desirous of providing special state aid to local schools to help finance driver education programs must, of course, establish a legal basis for so doing. In some instances legislation will be required to create an office for a driver education supervisor and staff in the Department of Education. In other cases, conflicting interests of commercial driving schools and public school driver education advocates create legal challenges and problems. In the main, however, the matter of legal authority can be counted as an obviously essential need that has largely been met for routine concerns relating to driver education in the schools.

Organization and Administration

Program administration in driver education is both a local school concern and a

State Education Department responsibility. By virtue of The Highway Safety Act of 1966 some aspects of program administration now extend to the federal government as well. Earlier in this paper this Congressional Act was viewed as virtually certain to result in a significant quantitative growth of driver education throughout the nation. The reason is that of all the highway safety technical areas covered in the Act (driver licensing, motor vehicle inspection, traffic records, etc.) provision for driver education alone was specified as a condition for federal approval and funding. Specifically, the law provides, in part, that the Secretary of Transportation shall not approve any State highway safety program ". . . which does not . . . provide for comprehensive driver training programs, including (1) the initiation of a State program for driver education in the school systems or for a significant expansion and improvement of such a program already in existence, to be administered by appropriate school officials under the supervision of the Governor. . . ."

To date, the federal role has been largely that of issuing standards for driver education programs in the states and subsequently issuing a program manual which offers guidelines, suggestions and more specific back-up direction to support and extend the general standards, and providing limited funds to aid in the expansion and improvement of driver education.

The flow of federal funds for driver education to the states may strengthen the role of the state education department, as has been the case with some other federal support programs. If this occurs it can only be regarded favorably, since the state office staff has shown itself, by actual example, capable of greatly improving or undermining local school driver education efforts, depending on the demonstrated leadership or lack thereof. By setting instructional policies, recommending procedures, determining certification requirements, controlling reimbursement, and taking an official position, the state education department can exert a powerful influence on driver education in the local schools.

While all state education departments have assigned responsibility for driver education to a staff member, in 17 states the designated person devotes 50 percent or less of his time to this responsibility. In only 21 states (1967-68) is the responsibility full-time for one or more persons. It is to the credit of the professionals concerned that a number of state driver education supervisors, particularly in past years, have managed to perform their work so well under the twin handicaps of limited time and a lack of significant educational preparation and teaching experience in driver education.

That all is not well in driver education program administration on the local school level is charged in an editorial in *The CALDEA Calendar.*

"Too much attention of school administrators responsible for the program is directed at keeping costs within state reimbursement without serious regard for program objectives, selection of instructors on the basis of athletic coaching ability rather than qualifications in driver education, maintenance of the status quo in the face of repeated mandates by the state legislature to provide quality instruction that will properly prepare young people for safe driving.

"Too much of the program is organized

for the financial benefit and convenience of teachers and administrators rather than students, with a lack of regard for keeping proper records, evaluative standards for students, supervision of instructors, and incentive for improved instruction."

Driver educators and school administrators are obliged to join together in exercising leadership to improve program administration and supervision. This area must receive priority attention in the years immediately ahead. Failure to do so undercuts the work of even the best teachers who under such conditions will, in time, move either to other schools or other teaching assignments. One survey conducted in Illinois (1962-63) identified 93.5 percent of the responding state high school principals as favoring an elective driver education course in the school curriculum. (The 588 respondents represented 90 percent of the high school principals in the state.) An expression of support of this dimension needs to be followed with specific administrative policies and decisions that better assure a meaningful learning experience for students.

ASF is attempting to aid state driver education supervisors in meeting the challenges and problems of their assignments. As a part of the series of regional Highway Safety Management seminars the Foundation conducted under NHSB contract last year, staff members counseled with driver education supervisors in attendance from around the nation. A current ASF staff project includes planning for a series of regional workshops for state supervisors with particular emphasis on curriculum development, instructional improvement and evaluation.

Teacher Selection, Preparation and Licensure

Angus B. Rothwell, writing in the NEA publication, "Teacher Preparation and Certification," says, "The primary factors insuring quality instruction in all subject areas of the school curriculum relate to the selection, preparation, and performance of the teacher.

"Successful driver and traffic safety education programs are taught by carefully chosen, well prepared, competent teachers. There are no exceptions to this rule."

A critical need in driver education today is for a strengthening of the teacher selection-preparation-certification process. That so much is expected from teachers given so little opportunity to suitably prepare for their work seems a poor reflection on the educational community.

Formal teacher preparation in the field began in 1936 when the American Automobile Association sponsored a course taught by Professor Amos Neyhart at Pennsylvania State College (now University). For many years thereafter, most teacher preparation efforts took the form of 40-hour (one week) offerings, often in summer school, at colleges and universities around the country. The "faculty" was often Professor Neyhart who moved from one location to another and is credited with having prepared more than 20,000 driver education teachers over the years.

In time most colleges and universities formally adopted a credit course and assigned or secured a resident faculty member to teach the course.

An extensive study completed six years ago identified 210 colleges and universities in the United States as offering the initial (basic) teacher preparation course in driver education. A number of these institutions also offered *additional* courses in safety and traffic education. Thirty-five colleges and universities in the nation were identified as offering a substantial number of courses (undergraduate or graduate) recommended for teacher preparation and certification in driver education.

A few universities have developed advanced graduate degree programs in safety education broadly, or traffic safety education specifically. Known by a number of labels such as "Center for Safety" or "Highway Traffic Safety Center," these units typically have ties to engineering, enforcement, transportation or accident prevention concerns in the broadest sense. They also commonly serve teaching, research and public service functions. The Association of State Universities and Land-Grant Colleges published a booklet containing case studies of nine such programs in 1962. One of these, at Michigan State University, was created initially by the state legislature following a study and recommendation by the faculty and administration.

Program development of this sort has been slow in recent years because of enrollment pressures and other forces affecting general university growth and development. The fact that leadership of this kind is needed is reflected in the findings of the 1962 study mentioned earlier. There is no evidence of significant improvement since the study was concluded. Some findings were:

- A number of important aspects of the introductory teacher preparation courses in driver education show a marked lack of consistency from one institution to another.
- Most colleges and universities offering the introductory teacher preparation course in driver education currently provide this course under administrative and instructional circumstances that imply a lack of concern for a quality teaching-learning environment.
- A limited number of colleges and universities offer a sequence of courses which can enable interested students to gain the recommended minimum preparation to become certified to teach high school driver education.
- More than half of the 37 colleges and universities that *claim* to offer a minor or major teaching field in safety and/or driver education fail to offer a curricular program that permits a student to complete the professionally recommended program of required and elective courses.
- The selected colleges and universities, institutions that offer the more extensive curricular programs in the nation, devote significantly little time and effort to research, publication, or field service activities as an adjunct to the driver education program.

Within the past few years, some states and universities have taken steps to improve the teacher preparation problem. For example, Missouri established a Safety Education Center at one of its state colleges. Minnesota is in the process of expanding the capabilities of selected state institutions. Wis-

consin is encouraging a phase-out of limited-scope programs at a few colleges so that the more advanced programs at other state institutions can secure the necessary staff, facilities, and other resources required for a top-flight effort.

Certification requirements and practices are also of concern. Many certification regulations reflect the out-moded notion that a driver education teacher or supervisor can be suitably prepared for his specialty area in one, or possibly two courses. As school programs have grown and an increasing percentage of driver education teachers devote full-time effort to teaching or administrative responsibilities in this field, the ironies of this one preparation course concept become evident.

Problems related to certification are by no means confined to inadequacies in courses required and taken. A recent study by Dr. Ed Lorenzen of San Francisco State College revealed the need for reform in: supervision and surveillance of driver records of driver education teachers; selection, assignment and removal of teachers by school administrators; and professional membership responsibilities of driver education teachers.

There is no blanket suggestion here that driver education's problems will be solved by more courses, either demanded by certification or provided by colleges and universities. There is, however, a need for more time to enable preparation for this specialty area, just as in any teaching field. The prevalent one- or two-course certification arrangement invites those more interested in earning additional money on a part-time after-school-hours basis, than those preparing for a career in traffic safety education.

There is also a need for better, more productive use of whatever time is provided, particularly through improved curricular content. Until recent years there were but one or two universities in the nation that provided the prospective college instructor with a chance to gain a breadth and depth of knowledge in this field. Such opportunities are not abundant today. As a result, many teacher preparation programs are manned by sincerely interested but greatly handicapped instructors.

It is obvious that until the teacher selection-preparation-certification problems in driver education are overcome, improvements will be difficult. Guidelines are available, but their implementation moves slowly. A 3,500 member national association of driver and traffic safety educators, the American Driver and Traffic Safety Education Association (NEA), needs strengthening to work for needed reform. That driver education has performed as well as it has despite the several handicaps described is surprising. Dr. James Adams, a Columbia University psychologist, puts it this way: "We feel that driver education is a very poorly managed bit of instruction in most places. It is often turned over to some guy who couldn't make it as a coach, and who does it because he needs the work. The states set only minimum standards, and the schools look down on it because it's not academic. But in spite of this, it has done an extremely good job in reducing accidents."

ASF has worked to improve the teacher selection-preparation-licensure process over a period of many years. Virtually all early-year effort was in the form of grants to the National Education Association's National Commission on Safety Education. Since the

initial grant in 1943, the Foundation has provided over one million dollars of support, a significant share of which has been directed toward teacher preparation and certification. More recently, ASF staff members have directed training sessions and provided consultant assistance to state education departments, colleges and universities in behalf of improved teacher education efforts.

Teacher selection, preparation and licensure continue to demand priority attention if driver education in the schools is to be made more effective.

Curriculum and Instruction

High school driver education today is typically organized as a separate course in the curriculum. In the early years, classroom time devoted to driver education and traffic safety often took form as a "unit" of study in a social studies or science course. Indeed, owing to the interdisciplinary nature of driver education content, these early units were initiated in a variety of places: social studies (accidents as a sociological problem); science (physical laws as they affect motion and driving); industrial arts ("because the need and importance of safety is well known and understood in the industrial setting"); health and physical education ("safety is a logical extension of hygiene and health concerns"); and other subject areas where an "interested" teacher was located.

The first two textbooks produced for the schools, and often donated for use, were prepared under the aegis of the American Automobile Association and the National Conservation Bureau. In more recent years, high school textbooks, college preparation texts, and other curricular materials have been made available by a number of well-known publishing houses.

States and school districts began producing curriculum guides (often safety, including driver education) in the late 1930's. In 1967-68, 42 states made such a curriculum guide available and 4,859 schools reported the use of a local course of study.

In January, 1967, the Automotive Safety Foundation announced a "Driver Education Curriculum Study and Development Project" with Dr. Richard W. Bishop of Florida State University as Study Director and ASF consultant for the duration of the study. This is the first national study of its kind and the project seeks to develop a more effective, realistic and unified driver education curriculum. By an ordering of priorities and a sharpening of objectives stated in measurable terms, both improved content and methodology are anticipated. The over-all goal is a marked rise in the level of driver competence and responsibility through education. The curriculum publication will be released late in 1969. Implementation and follow-up phases of the project are scheduled for 1970.

The Simulation Method

Driver educators have continuously sought answers to difficult instructional questions; in so doing they have moved with and ahead of the times. The area of simulation serves as one example. In 1969 the concept of simulation and the use of simulation materials and techniques in an instructional setting is no longer regarded as innovative; 16 years ago when driver simulators were first placed in use in an Illinois high school it was a far different situation.

Driver simulation lets students "drive" to filmed driving situations projected on a screen.

A driver simulator system consists of a number of units, each representing the driver's compartment of an actual car, which are "operated" in response to a series of filmed driving situations as they are projected on a screen; student responses are recorded by a master control unit operated under a teacher's supervision, and in some instances also displayed visually to each student at his individual unit. The simulator units are designed to duplicate the physical features, controls and instrumentation found in an actual car. Although stationary in a classroom (or mobile trailer), a feeling of motion can be realized through the use of wide-screen sound and color films.

Experience with instructional driver simulation reveals a number of advantages: (a) mass instruction—a typical high school driving simulation laboratory would contain 12-18 units—as opposed to the individual tutoring situation common to on-street behind-the-wheel instruction, thereby lowering per pupil costs; (b) opportunity to teach without danger vital lessons on driving under adverse conditions and in meeting driving emergencies; (c) ability to broaden learning opportunities to include practice driving under a variety of conditions and surroundings not available near the school or impractical to arrange (e.g., mountain driving, expressway situations).

Most schools using driver simulation do

so in accord with national recommendations which suggest a 4:1 ratio—that is, four hours of time in the simulators equals one hour of actual on-street behind-the-wheel time. Most authorities further recommend that at least some portion, perhaps two or more hours, of the minimum six hours laboratory time be spent under teacher supervision in an actual on-street driving situation. In practice then, a school using both the simulation and the on-street instructional methods might program student laboratory time as 12 hours of simulation plus three hours of on-street; under the recommended ratio this would total the equivalent of six hours of on-street practice driving time.

Aetna Life and Casualty Insurance Company pioneered simulator development and use in high school driver education in the early 1950's. Later, Allstate Insurance Companies also began sponsorship of driving simulators and introduced several innovative features. Both insurance companies currently maintain a staff which develops instructional films, teachers' manuals, and provides other forms of "software" assistance. The hardware in both instances is produced and marketed by other manufacturing and business enterprises.

A number of research studies have shown that the simulator method, properly used by a competent teacher, compares favorably with the on-street method. The general conclusion of one such study reported: "The findings of this study indicate that a program combining 12 hours of simulator experience as applied in this study with three hours behind-the-wheel taught by a competent in-

A typical driver simulation laboratory contains 12-18 units.

structor compared favorably with the conventional six hours behind-the-wheel also taught by experienced instructors. In fact, the potential of simulator instruction with respect to knowledge and skill (including perceptive skill and judgment) appears highly promising. The word "potential" is emphasized since, regardless of teaching method, the teacher is still the key to effectiveness. This statement applies to either simulator or behind-the-wheel instruction."

In the 1967-68 school year, 41 states reported one or more schools using driving simulators. California and Louisiana reported the largest school use with figures of 294 and 134 respectively. Students who received a portion of their driver instruction through simulation in this school year totaled 333,683, or nearly 17 percent of all those completing high school driver education courses.

The Automotive Safety Foundation currently has in preparation an administrative and instructional guide book for the use of simulation instruction in high school driver education courses. The booklet is expected to be published in early 1970.

The Multiple-Car Method

Another innovative laboratory method developed and used in driver education is the multiple-car method. A 1967 ASF publication devoted to an interpretation of this instructional approach defined and explained the multiple-car method as follows:

"The multiple-car method permits several automobiles to be operated simultaneously on a special off-street facility, under direction of one or more teachers positioned *outside* the vehicles. The teacher typically communicates with students by radio.

"This approach increases the teacher-vehicle ratio from 1:1 to 1:X. The unknown X will depend on the number of vehicles used. Generally, however, maximum economy and driver interaction is achieved when six or more vehicles are in use simultaneously. On some facilities, as many as 12 students receive instruction at the same time from *one* teacher's direction.

"Thus the distinctive features of the true multiple-car method are that: (a) more cars than teachers are functioning at the same time; and (b) students are instructed by a teacher positioned outside the vehicles. From an educational standpoint, the multiple-car method emphasizes *learning* rather than *teaching*. With the instructor outside the car, the student is freed from the pressure of close contact with the teacher and adjusts to the various driving situations himself. This tends to instill confidence and self-determination in the student."

In a number of respects, the multiple-car method represents a middle ground between the simulation setting and the actual on-street driving situation. And, like simulation, advantages of this method include lowered per-pupil costs, and greater opportunity to reach more students with no sacrifice in instructional quality. The commonly used ratio of multiple-car to on-street time is 2:1. As with simulation, some actual on-street driving time is recommended.

Although initiated in 1936 at Chicago's Lane Technical High School, interest in the method was slow to develop until the late 1940's and early 50's. Developments at that time in Detroit later spread to other Michigan schools. This is evident today (despite

The multiple-car method allows several automobiles to be operated on off-street facilities.

A teacher, positioned outside vehicles, instructs student drivers in the multiple-car method.

the weather problems that inhibit or curtail year-round operations) in that Michigan's 69 off-street multiple-car facilities were used to prepare 49,809 driver education students in 1967-68, the largest number of students so prepared in any one state. Florida has become strongly committed to the use of this method within the past few years. Florida has 82 multiple-car facilities (more than any other state) and slightly more than half of the state's 71,734 driver education students in 1967-68 received at least part of their instruction via the multiple-car method. On a national basis (1967-68), 464 schools reported using this method to instruct 153,600 students, or approximately eight percent of the total number completing high school driver education courses.

There is some evidence to suggest that the use of both simulation and the multiple-car method may greatly expand in the years immediately ahead. In fact, a trend may develop wherein both methods are used in combination, together with classroom and on-street instruction. In 1966-67 there were 150 schools in the nation offering such a "four-phase" program. When properly coordinated, a combination of classroom, simulation, multiple-car, and on-street instruction offers a well-sequenced instructional plan that permits the strengths of the various methods to complement each other.

Other Teaching Methods

Innovative approaches have not been con-

fined to the laboratory portion of the course. Half the states have some schools utilizing televised instruction in driver education classes. Team teaching has become popular in a number of localities. A commercially marketed multi-media system (programmed film strip-tape recorder combination) is in use. Various programmed text booklets have become a part of the audio, visual, and other instructional materials known both in driver education and other aspects of the total school program. In recent years, several driver educators have also joined forces with other teachers in developing effective programs for the educable mentally handicapped student who, like almost everyone else, will probably at some point in time begin driving an automobile.

Facilities and Equipment

The foregoing paragraph suggests the nature of some types of instructional equipment in use in high school driver education programs. Earlier mention was made of driving simulator laboratory facilities and off-street multiple-car areas. To this one must add provision for automobiles, classrooms, textbooks and other necessities. As schools have become larger and technology more advanced, attention to storage and maintenance has also become increasingly important.

There are certainly too many schools and teachers without adequate supplies, facilities and equipment for driver education to permit a write-off of this important component. Better equipment and supplies than now available in the market place is a clear need. Nevertheless, progress in meeting these needs is being made, however slowly, and is likely to continue. The answer to needs in this area is almost solely more funding; other components identified in this paper suffer under more numerous handicaps and as such must be given higher priority.

Financing

In the early years of high school driver education this instructional program was typically financed like any other—from local public tax revenues. In some cases, a portion of the support came from general state school funds apportioned on the basis of average daily attendance or some similar administrative guide. Today this type of state or local "foundation program" financing is used as the *exclusive* revenue source for driver education in less than one third of the states.

Over two-thirds of the states rely upon some form of *special* state support to local schools. In some instances this special state aid covers all instructional costs, and the driver education course is offered without utilizing local school funds. In other instances, a combination of special state aid and local tax dollars are needed to meet all costs.

A minority but apparently growing number of schools shake the concept of "free public education" by charging tuition either as a partial or sole revenue source; in 1967-68 average per-pupil tuition charges—reported on a state-wide basis per pupil—ranged from as little as $1.00 in one state to as much as $58.00 in another.

Teacher salary is the largest cost item of the driver education instructional program. Despite relatively high initial capital costs for simulation equipment and/or the development of a multiple-car facility, such costs

are usually fully recovered over a period of years where special state aid is available due to increased pupil-teacher ratios. Automobile manufacturers and dealers have contributed to an underwriting of instructional costs by furnishing cars for instruction on a free-loan basis. According to figures compiled by the Auto Industries Highway Safety Committee, more than 23,000 of the 25,719 cars used in high school driver education courses during 1967-68 were provided on a free-loan basis, a considerable investment-contribution of equipment.

In 1947, Delaware initiated a special state-aid program for driver education. In 1967-68, 34 states were using this procedure. The source of such funds typically is one or a combination of (1) a portion of fines collected from convicted traffic violators; (2) special "earmarked" appropriations from general state funds; (3) a portion of vehicle registration and driver license fees. The majority of states providing special state aid for driver education use a portion of vehicle and operator's license fees as their revenue source.

In 1967-68 five states permitted special state aid payments up to *actual* school expenditure, with payment prorated where the state's special fund proves insufficient; the highest per-pupil payment made in these five states was $59.45 (Vermont), the lowest was $18.00 (Maryland).

In the 27 states that set a maximum dollar figure for reimbursement of local school per-pupil costs, the highest was $55.00 (Delaware and Idaho), the lowest $3.00 (District of Columbia).

It has been estimated that the per-pupil cost for driver education in the United States averages about $55.00. Some states have made considerable progress in planning to meet financial needs for driver education in the schools, but others have not.

Evaluation, Research and Development

As an earlier portion of this paper suggests, evaluation, research and development in driver education has not been abundant. There are definite signs that this is changing rapidly—as well it should.

Once programs are established, whether at local or state level, provision must be made to evaluate effectiveness and continuously improve capability. Emphasis needs to be placed on *implementation* of data resulting from experimentation, research and evaluation.

Except in the larger schools, most of these efforts cannot reasonably be expected of local schools. State education departments have a clear responsibility to stimulate, assist or lead evaluation, research and development efforts. Colleges and universities offer much potential, as do other interested organizations with staff competent to work in this field.

Evaluation, research and development must be considered a major priority for driver education in the schools.

Public Information and Support

None of the foregoing needs can be met in a free society without the support of the public. Laws cannot be passed, financing cannot be authorized, and programs cannot be developed and implemented without public support. And the public is unlikely to support that which they know little about or fail to understand.

At all levels of education and government, there must be an active and continuing concern for public information and support endeavors, if driver education in the schools is to be a reality.

Summary

In little more than three decades, high school driver education has grown from a single-purpose experimental course offered in one public school to a multi-faceted program considered part of the regular curriculum in nearly 14,000 public schools. It was available to but a few young people in 1933, whereas during the 1967-68 school year enrollment totaled nearly 2 million students.

The growth of driver education in the schools has not been universally received as a blessing. Questions raised about its effectiveness as an accident countermeasure have been only partially answered. Whether driver education is a proper function of the schools can still arouse lively debate in some circles, but the trend for its inclusion in the school program is unmistakable.

The driver education curriculum is intended to achieve numerous, sometimes diverse, goals. In addition to the obvious short-range goal of a competent motor vehicle operator, another important and long-range objective is that of responsible citizenship, both in relation to traffic and in the larger societal setting. Challenges for curricular improvement are being voiced, and work to achieve improvement is currently under way.

The nature of high school driver education has changed over the years, particularly in the laboratory portion of the course. Simulation and the multiple-car method are the most prominent innovative developments;

their future utilization is likely to be greatly accelerated.

Financial support of high school driver education has, over the years, shifted from almost exclusive reliance on local tax dollars to some type of special state aid.

The need for improvement in driver education achieves sharp focus in the areas of: (1) program administration and supervision; (2) teacher selection, preparation and certification; and (3) evaluation, research and development.

With an increasing awareness of the importance of high school driver education on the part of educators, legislators, and the public at large, it is not unreasonable to foresee continuous growth both qualitatively and quantitatively. One measure of the importance attached to driver education today is found in its specific inclusion in the Highway Safety Act of 1966. Federal funding is aiding driver education in the schools today.

Whatever the future may hold for high school driver education, it is important for educators to examine pertinent issues and problems with a view toward instructional improvement. This demands attention to factors such as legal authority; organization and administration; teacher selection, preparation and licensure; curriculum and instruction; facilities and equipment; financing; evaluation, research and development; and public support. It is equally important that educators be aided in their work by other highway safety professionals and the public at large.

When these several components are soundly planned, suitably coordinated, and well executed, the result will be an improved measure of highway safety.

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Objectives of the Automotive Safety Foundation

The objectives of the Foundation as expressed in its Certificate of Incorporation are:

"To foster the general welfare and to promote the mutual interests of the public and the automotive industries by encouraging the safe and efficient use of streets and highways; by stimulating research into the causes of street and highway accidents; and by disseminating information on the safe use of motor vehicles, on effective methods of preventing accidents, on ways and means of relieving congestion and facilitating traffic with safety, and on other matters affecting the motor vehicle and its use; the development on a sound financial and engineering basis of modern street and highway facilities essential to present and future needs for safe and efficient highway transportation."